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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,371	10/05/2000	Rodney S. Tucker	10001757-1	2577

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**AGILENT TECHNOLOGIES**  
Legal Department, 51U-PD  
Intellectual Property Administration  
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EXAMINER

KIM, DAVID S

ART UNIT

PAPER NUMBER

2633

8

DATE MAILED: 10/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/684,371	TUCKER ET AL.
Examiner	Art Unit	
David S. Kim	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 11 July 2003.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 5,6,9-15,19,20 and 23-27 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-4,7,8,16-18,21 and 22 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 05 October 2000 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u> . | 6) <input type="checkbox"/> Other: _____ .                                   |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. **Claims 5-6, 9-15, 19-20, and 23-27** are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected species, there being no allowable generic or linking claim. Election was made **with** traverse in Paper No. 7.
2. Applicant's election with traverse of **Species III, claims 1-4, 7-8, 16-18, and 21-22** in Paper No. 7 is acknowledged. The traversal is on the ground(s) that follow(s):

"[t]he present restriction requirement provides no reason and/or examples to support the conclusion that claims 1-27 are directed to patentably distinct species. Additionally, the restriction requirement provides no explanation of separate classification, or separate status in the art, or a different field of search. As a result, Applicants assert that the burden of establishing the basis for the restriction requirement has not been met and that the present restriction requirement is improper" (Paper No. 7, page 8, last paragraph).

This is not found persuasive because Applicant's argument relies on an explanation of separate classification, separate status in the art, or a different field of search. While such an explanation is normally required in many restriction situations, such is not the case with an election of species. MPEP 809.02(a) cites that the Office should take the following action regarding election of species:

"Clearly identify each...of the disclosed species...The species are preferably identified as the species of figures 1, 2, and 3...Applicant should then be required to elect a single disclosed species."

Office practice regarding elections of species does not require an explanation of separate classification, separate status in the art, or a different field of search. Rather, the presence of independent species means that a generic inventive concept is practiced in multiple embodiments, thus obviating the relevance of separate classification, separate status, and different fields of search (MPEP 808.01(a)). Instead, since the claims are directed to

independent inventions, restriction is proper pursuant to 35 U.S.C. 121. Regarding further discussion of species issues, please see MPEP 806.04(e)-(h).

Additionally, as noted in the previous Office action (Paper No. 7, page 2), should Applicant traverse on the ground that the species are not patentably distinct, Applicant should submit evidence of identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if Examiner finds one of the inventions unpatentable over the prior art, the evidence of admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

The requirement is still deemed proper and is therefore made FINAL.

***Drawings***

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

***Specification***

5. The abstract of the disclosure is objected to because its undue length. Correction is required. See MPEP § 608.01(b).

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means"

and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

7. The disclosure is objected to because of the following informalities:

On page 17, line 3, "Fig. 6" is used where "Fig. 11" may be intended.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. **Claims 1-4, 7-8, 16-18, and 21-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Graves et al. (U.S. Patent No. 6,115,162) and Tolson (U.S. Patent No. 6,208,850 B1).

**Regarding claim 1,** the admitted prior art discloses an optical heterodyne detection system (Fig. 1) comprising the first optical path, the second optical path, the optical combining means, the third optical path, and the photodetector.

The admitted prior does not expressly disclose the optical pre-selector and the means for adjusting said optical pre-selector passband. However, optical pre-selectors are well known and common in the field of heterodyne systems. Graves et al. teaches such a pre-selector (Graves et al., filter 62 in Fig. 4). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include an optical pre-selector in the heterodyne system of the admitted prior art. One of ordinary skill in the art would have been motivated to do this to isolate the frequency band of interest (Graves et al., col. 2, line 67 – col. 3, line 1). Additionally, means for adjusting the passband of pre-selectors is also well known and common in the field of heterodyne systems. Tolson teaches such means (Tolson, Fig. 1). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate means for adjusting the passband of the pre-selector of the admitted prior art in view of Graves et al. One of ordinary skill in the art would have been motivated to do this the selectivity of such pre-selectors largely determines the performance of the system (Tolson, col. 1, lines 26-28). A minimum bandwidth for the pre-selector, consistent with adequate reception of the wanted signal would enhance receiver performance considerably (Tolson, col. 1, lines 28-31). The teachings of Tolson enable such a minimum bandwidth (Tolson, col. 1, lines 35-38).

**Regarding claim 2,** the admitted prior art in view of Graves et al. and Tolson discloses a phase modulator (Tolson, phase change in abstract). The admitted prior art in view of Graves et al. and Tolson does not expressly disclose said phase modulator being responsive to said means for adjusting and being located along an optical path that is before said optical pre-selector. However, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the phase modulator of the admitted prior art in view of Graves et al. and Tolson. One of ordinary skill in the art would have been motivated to do this to better control the phase modulation. Also, additional phase modulation can be used impart

extra information, such as control information or identification information, to the local oscillator signal, thereby further employing underutilized, available bandwidth.

**Regarding claim 3,** the admitted prior art in view of Graves et al. and Tolson does not expressly disclose real-time measuring. However, real-time measuring is well known and common in the art. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate real-time measuring in the system of the admitted prior art in view of Graves et al. and Tolson. One of ordinary skill in the art would have been motivated to do this to provide the most updated status of the system during operation, thus enabling a quicker and more dynamic response to changes in the system conditions.

**Regarding claim 4,** the admitted prior art in view of Graves et al. and Tolson does not expressly disclose the clock source. However, clock sources are extremely well known and conventional in the art. One of ordinary skill in the art would have been motivated to do this to provide appropriate synchronization of various elements in the system of the admitted prior art in view of Graves et al. and Tolson.

**Regarding claim 7,** the admitted prior art in view of Graves et al. and Tolson discloses the pre-selector arranged to filter said input signal within said first optical path (Graves et al., Fig. 4; Tolson, Fig. 1).

**Regarding claim 8,** the admitted prior art in view of Graves et al. and Tolson discloses the passing and the interacting (Tolson, Fig. 1, abstract). The admitted prior art in view of Graves et al. and Tolson does not expressly disclose the tapping and the delaying. Such processes are well known and common in the art. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include the tapping. One of ordinary skill in the art would have been motivated to do this to isolate the local oscillator signal to provide more controlled phase modulation. Also, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include the delaying. One of

ordinary skill in the art would have been motivated to do this to provide more precise synchronization for the interacting.

**Regarding claims 16-18 and 21-22,** claims 16, 17, 18, 21, and 22 are method claims that correspond to system claims 1, 2, 4, 7, and 8, respectively. Therefore, the recited means in system claims 1-2, 4, and 7-8 read on the corresponding steps in method claims 16-18 and 21-22.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Kim whose telephone number is 703-305-6457. The examiner can normally be reached on Mon.-Fri. 9 AM to 5 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703-305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

DSK



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